

**PARALLEL STRATEGIES OF VERBAL COMPLEX FORMATION IN
HUNGARIAN AND WEST-GERMANIC?**

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1. Introduction

After some preliminary information on the Hungarian verb phrase in section 2, the paper will analyze the different strategies of verbal complex formation in Hungarian - also discussing facts not considered in the literature so far, and will demonstrate that the outputs of these strategies are similar to the types of verbal complexes found in some West-Germanic languages. Section 3 will discuss two kinds of Hungarian verbal complex formed by the generation of an extended verb projection, and section 4 will demonstrate their similarity to the verbal complexes attested in Dutch, West Flemish, and Swiss German. Section 5 will examine the Hungarian verbal complex formed by cyclic incorporation, and section 6 will point out its similarity to the verbal complex found in standard German. It will be suggested that the correspondences between the Hungarian and West-Germanic constructions may result from similar operations performed on a similar base. Section 7 will briefly discuss the derivation of the West-Germanic verbal complexes from an OV base, and section 8 will demonstrate why the proposed approach cannot be applied to Hungarian. The discussion will lead to the conclusion that the similar Hungarian and German constructions can only be derived in a parallel fashion, by means of similar operations if these operations are applied to a VO base in West-Germanic, as well.

2. Preliminaries: the minimal verbal complex in Hungarian

The analysis of Hungarian infinitival constructions depends, in part, on the structure that we assign to the minimal verbal complex. It will be assumed that the Hungarian VP is a V-initial construction subsumed by a series of morphosyntactic projections (ModalityP, TenseP, MoodP, AgrOP, and AgrSP in the case of finite verbs, and InfP in the case of infinitives),¹ whose heads are spelled out suffixed to the verb. A notoriously problematic element of the verbal complex is the so-called verb modifier (VM): a non-referring expression constituted by a bare adverb, a bare noun, a case-marked adjective, or a postposition, which usually changes the actionsart of the verb, and also modifies its meaning in other ways. In neutral sentences the verb modifier precedes the verb, constituting a phonological word with it:

- (1)a. *János haza ment.*
 John home went
 'John went home.'
- b. *János levelet ír.*
 John letter-ACC writes
 'John is letter-writing.'
- c. *Jánost mindenki bolondnak tartja.*
 John-ACC everybody fool-DAT considers
 'John, everybody considers a fool.'

In the presence of a focus or a negative particle, on the other hand, the verb modifier follows the verb:

- (2)a. [_{FP} *JÁNOS ment haza*]
 John went home
 'It was John who went home.'
- b. [_{TopP} *János* [_{FP} *MARINAK írt levelet*]]
 John Mary-DAT wrote letter
 'As for John, it was to Mary that he wrote a letter.'
- c. [_{DistP} *Mindenki* [_{FP} *JÁNOST tartja bolondnak*]]
 everybody John-ACC considers fool-ACC
 'For everybody, it is John that he considers a fool.'
- (3)a. [_{TopP} *János* [_{NegP} *nem ment haza*]]
 John not went home
 'John didn't go home.'
- b. [_{TopP} *János* [_{NegP} *nem írt levelet*]]
 John not wrote letter
 'John didn't write any letters.'
- c. [_{TopP} *Jánost* [_{NegP} *nem tartja bolondnak mindenki*]]
 John-ACC not considers fool-DAT everybody
 'John isn't considered a fool by everybody.'

The description of the different verb modifier--verb orders in (1)-(3) depends, in part, on whether the VM is analyzed as a phrase or as a head. It is an indication of the phrasal status of the VM that it can move at a long distance - even across a clausal boundary. For example:

- (4)a. *Levelet_i kell_i*, [_{CP} *hogy írjunk t_i Jánosnak*]
 letter-ACC needs that write-we John-DAT
 'It is necessary that we write a letter to John.'
- b. *Haza_i akarom_i*, [_{CP} *hogy gyertek t_i*]
 home want -I that come-you
 'I want you to come home.'

The verb modifier can also be focussed or topicalized, i.e., it can be moved to Spec,FP, and Spec,TopP, which are landing sites for phrasal constituents. E.g.

- (5)a. [_{TopP} *Bolondnak* [_{FP} *JÁNOST tartják*]]
 fool-DAT John-ACC consider-they
 'It is John that they consider a fool.'
- b. [_{FP} *Csak LEVELET küldtem Jánosnak*], *csomagot nem*.
 only letter-ACC sent.I John-DAT parcel-ACC not
 'It was only letter(s) that I sent to John; parcel(s), I didn't send him.'

Furthermore, the VM can constitute an elliptical sentence in itself, which is also considered to be a phrasal property:

- (6) “*Meg etted az ebédet?*” “*Meg.*”
 up ate-you the lunch up
 'Have you eaten up the lunch?' “Yes.”

These facts suggest that the VM is a phrase, consisting of a mere head. Since the adverbial VM, the so-called preverb, usually plays a perfectivizing role, and every type of verb modifier affects the aspect of its clause in some way,² let us assume that the VM occupies the specifier of an AspP projection. Let us also assume that the V is raised into the empty Asp head. This latter assumption would explain why the post-VM section of the sentence cannot be subject either to coordination (7) or to ellipsis (8):

- (7)**A macska* [_{AspP} *fel* [[*ugrott az asztalra*] és [*mászott a kerítésre*]]]
 the cat up jumped the table-on and climbed the fence-on
 'The cat jumped up on the table and climbed up on the fence.'
- (8) **János nem sokáig tanulta a verset, de* [_{AspP} *meg* [~~*tanulta a verset*~~]].
 John not long learned the poem but PERF ~~learned the poem~~
 'John has not been learning the poem for long, but he has learned it.'

The ungrammaticality of (7) and (8) must be a consequence of the fact that the constituents subjected to coordination and ellipsis are not maximal projections but are of the category Asp'.

The postverbal position of the VM in sentences containing an identificational focus or a negative particle is derived from the assumption that in such sentences no AspP is generated; the F(ocus) head or Neg head is merged with the VP, instead of AspP - see (9a,b).³ That is, FP and NegP are not extensions of AspP but are alternatives to it.

- (9)a. [_{FP} *JÁNOS_i*] [_{VP} *mászott fel t_i a kerítésre*]]
 John climbed up the fence-on
 'It was John who climbed up on the fence.'
- b. [*János_i*] [_{NegP} *nem* [_{VP} *mászott fel t_i a kerítésre*]]]
 John not climbed up the fence-on
 'John did not climb up on the fence.'

The assumption that sentences with an identificational focus or negation lack an AspP projection is also semantically motivated: as argued e.g. in É. Kiss (2002), aspect is neutralized in the scope of identificational focus and negation.

3. The straight order extended verbal complex in Hungarian

Hungarian being an agglutinating language, auxiliaries play no major role in Hungarian syntax. Nevertheless, there is a group of verbs subcategorizing an infinitive phrase which do not relate to their infinitive phrase complement as a lexical head relates to a subordinate clause but rather form an extended verb projection with it. This group includes verbs of temporal and modal meaning, among them:

- (10)a. *fog* 'will', *szokott* 'used to', *talál* 'happens to'
 b. *szeretne* 'would like', *kezd* 'begin', *készül* 'prepare', *próbál* 'try', *bír* 'manage', *kíván*
 'desire', *óhajt* 'wish', *mer* 'dare', *szándékozik* 'intend', *tud* 'can'
 (cf. Kálmán et al. (1989), Kenesei (2000))

What is common in these verbs is that (at least under one interpretation) they do not assign theta roles, but combine with a theta-role-assigning infinitival head, and share its arguments. Those enlisted under (10a) are totally incapable of independent theta role assignment, hence they always merge with an infinitive. The verbs listed under (10b), on the other hand, can apparently either be associated with a theta-grid of their own, or can combine with an infinitive, sharing its arguments. The former set of verbs are assumed to be marked as [+auxiliary], and the latter set of verbs, as [+/-auxiliary] in the lexicon (or, adopting a proposal by van Riemsdijk (1998), they are marked as [+functional] or [+/-functional], respectively).

A string of verbs consisting of one or more auxiliaries and one theta-role-assigning lexical verb constitute a verbal complex. If the verbal complex consists of three or more verbal elements, it becomes clear that there are two basic strategies of verbal complex formation, which yield strings with opposite word orders.

In the straight order verbal complex, the finite verb (to be referred to as V1) stands first, and the lexical infinitive (to be referred to as V4) stands last. In neutral sentences, involving no focus or negation, the verb modifier, selected by the lexical verb, precedes all verbal elements.

- (11) A *fogoly haza fog akarni próbálni szökni.* (VM V1 V2 V3 V4)
 the captive home will want-INF try-INF flee-INF
 'The captive will want to try to flee home.'

If the verbal complex is merged with a focus or a negative particle, the verb modifier will stand in front of its lexical head, V4:

- (12) a. A *fogoly KARÁCSONYKOR fog akarni próbálni haza szökni.* (F V1 V2 V3 VM V4)
 the captive Christmas-at will want-INF try-INF home flee-INF
 'The captive will want to try to flee home AT CHRISTMAS.'
 b. A *fogoly nem fog akarni próbálni haza szökni.* (Neg V1 V2 V3 VM V4)
 the captive not will want-INF try-INF home flee-INF
 'The captive will not want to try to flee home.'

Some speakers also accept the V1 VM V2 V3 V4 order after a focus or a negative particle, with the VM preceding the non-finite section of the verbal complex - see (13a,b). The V1 V2 VM V3 V4 order illustrated in (14a,b) is very marginal also for these speakers.

- (13)a.? A *fogoly KARÁCSONYKOR fog haza akarni próbálni szökni.* (F V1 VM V2 V3 V4)
 the captive Christmas-at will home want-INF try-INF flee-INF
 'The captive will want to try to flee home AT CHRISTMAS.'

b.?A *fogoly nem fog haza akarni próbálni szökni.*

but:

- (14)a.?*A *fogoly KARÁCSONYKOR fog akarni haza próbálni szökni.* (F V1 V2 VM V3 V4)
 b.?*A *fogoly nem fog akarni haza próbálni szökni.*

The V1 V2 V3 VM V4 order attested in (12a,b) is ungrammatical in lack of a focus or a negative particle (and so are its degraded variants in (13) and (14)). In a so-called neutral sentence, involving neither focusing, nor negation, the verb modifier is obligatorily raised in front of the whole verbal complex. Thus (15) is ungrammatical - unless *fog* 'will' is understood to be contrasted with a previous *nem fog...* 'not will...'. expressing emphatic assertion: the denial of a previous denial

- (15) %_[TopP] A *fogoly* [_{VP} *fog akarni próbálni haza szökni*] (%V1 V2 V3 VM V4)
 the captive will want-INF try-INF home flee-INF

The generalization emerging from examples (11)-(15) is that an auxiliary cannot represent the main assertion in a sentence. By main assertion I mean the highest - and leftmost - element of the predicative complex, that which bears the heaviest stress (given that phrasal stress is assigned to the left edge of phrases in Hungarian). It is this element that necessarily expresses non-presupposed information in a matrix sentence. In a sentence consisting of a topic and a VP, the main assertion is represented by the V - see (16a). If the VP is subsumed by an AspP, the main assertion is represented by the verb modifier in Spec,AspP - as in (16b), in which the main assertion is the completion of the action denoted by the VP. If the VP is preceded by negation, the main assertion is the negation of the - possibly presupposed - VP - see (16c). If the VP is preceded by a focus, the exhaustive identification of the referent of the focus represents the main assertion - see (16d). If the focus is preceded by negation, the main assertion is represented by the pre-focus negative particle - given that in this case everything else, the focus included, is (or at least can be) presupposed - see (16e).

- (16)a. *János* [_{VP} *olvas egy könyvet*]
 John reads a book
 'John is reading a book.'
- b. *János* [_{AspP} *ki olvasta_i [VP t_i a könyvet]*]
 John through read the book
 'John has finished reading the book.'
- c. *János* [_{NegP} *nem [VP olvasta ki a könyvet]*]
 John not read through the book
 'John has not finished reading the book.'
- d. *János* [_{FP} *TAVALY [VP olvasta a könyvet]*]
 John last.year read the book
 'It was last year that John read the book.'
- e. *János* [_{NegP} *nem* [_{FP} *TAVALY [VP olvasta a könyvet]*]]
 John not last.year read the book
 'It wasn't last year that John read the book.'

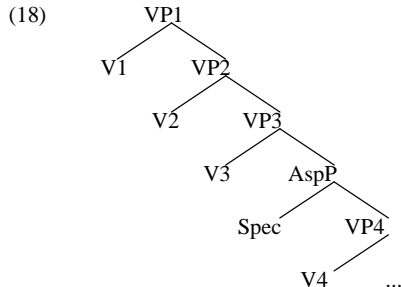
In (15) the main assertion is not the content of the auxiliary. The auxiliary merely serves as the carrier of the main assertion; the semantic structure of (15) is understood to contain two negations above the auxiliary, meaning 'it is **not** the case that the captive will **not** want to try to escape'. That is, the following generalization can be maintained:

(17) *The Auxiliary Constraint*

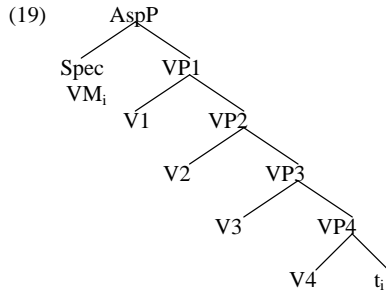
An auxiliary cannot represent the main assertion in a clause.

(17) means for Hungarian - and possibly also for other languages in which phrasal stress is assigned to the left edge of phrases - that an auxiliary cannot be the highest predicative element in a sentence. So as to avoid a violation of (17), the highest auxiliary in a verbal complex must be preceded by a verb modifier (as in (11)), a focus (as in (12a)), or a negative particle (as in (12b)) - or else it will be interpreted as the carrier of the denial of a previous negation.

The next question is how the two different VM positions attested in (11) and (12) (and possibly also the marginally acceptable VM position attested in (13)) should be derived, and should be related to each other. If the lexical verb (V4) of the verbal complex selects a verb modifier, it will have to land in the specifier of an AspP. This AspP can be generated immediately above the infinitival lexical verb, as represented in (18):



This construction, however, cannot represent the predicate of a Hungarian sentence in itself, because it violates the Auxiliary Constraint. It can only survive if it is subsumed by an operator projection: a F(ocus)P or a NegP. In (12a) it is extended into an FP, and in (12b), into a NegP. In lack of a focus or a negative particle, the verbal complex escapes the Auxiliary Constraint only if AspP is generated on top of the whole verbal complex - see (19). Since V1, V2, V3, and V4 are associated with a shared argument structure, they constitute a phase together, so VM movement into the specifier of AspP dominating VP1 must be a phase-internal move. That is, it is not necessary for us to generate an AspP projections above each VP and to assume cyclic VM climbing.



The fact that some speakers also accept (13), and very marginally even (14), means that for them the AspP providing a landing site for the VM can be merged into the verbal complex also at an intermediate point. The resulting structure, naturally, will violate the Auxiliary Constraint, unless it is extended into an FP or NegP.

The question arises how the violation of the Auxiliary Constraint can be avoided if the lexical verb of the verbal complex selects no verb modifier, and the sentence contains no focus or negation. Then V4 does not project an AspP, however, the verbal complex as a whole will project one, whose specifier is to be occupied by V4 itself. The infinitive phrase can be analyzed as a verb modifier if it consists of a mere head, i.e., if its complements have been extraposed. E.g.

- (20) *Mari* [_{AspP} *énekelni fog akarni tanulni*] (V4 V1 V2 V3)
 Mary sing will want-INF learn-INF
 'Mary will want to learn to sing.'

Structure (18), displaying no VM climbing, and structure (19), involving VM climbing, appear to be merely contextual variants of the verbal complex: one used in the presence of a focus or a negative particle, the other used in a focusless assertive sentence. In fact, however, they differ in a semantically significant way. The verbal complex of (19), c-commanded by a shared AspP, can be modified by predicate adverbials, e.g. adverbials of frequency, only as a whole - see (21a,b). In the case of (18), on the other hand, adverbial modification can have varying scope, depending on where the adverbial stands - see (22a,b).

- (21)a. *A fogoly újra* [_{AspP} *haza fog akarni próbálni szökni*]
 the captive again home will want-INF try-INF flee-INF
 'The captive will again to want to try to flee home.'

b. ?*A fogoly* [_{AspP} *haza fog újra akarni próbálni szökni*]

- (22)a. *A fogoly nem fog újra akarni próbálni* [_{AspP} *haza szökni*]
 'The captive will not want again to try to flee home.'

b. *A fogoly nem fog akarni újra próbálni* [_{AspP} *haza szökni*]
 'The captive will not want to try again to flee home.'

c. *A fogoly nem fog akarni próbálni újra* [_{AspP} *haza szökni*]
 'The captive will not want to try to flee home again.'

(21a,b) have identical interpretations. No matter whether *újra* stands outside or inside AspP, it invariably applies to the whole verbal complex. (22a-c), on the other hand, are not synonymous; (22a) means repeated wanting, (22b), repeated trying, whereas (22c), repeated fleeing home. This situation is actually not unexpected, because the minimal sentence unit subject to modification by predicate adverbials is the AspP also in sentences containing only a finite verb.

The c-command domain of a VM raised into a matrix Spec,AspP is closed not only for adverbial modification, but also for focusing and negation (which, again, cannot be internal to AspP in the case of a simple verbal predicate, either). Compare (23) and (24): in the former, VM climbing excludes the possibility for the lower VPs to project an FP. In the latter, in which no VM climbing has taken place, any of the VPs can be extended into an FP.

- (23)a.* *Mari* [_{AspP} *el* [_{VP1} *fogja* [_{FP} *CSAK A MAHLER DALOKAT* [_{VP2} *akarni* [_{VP3} *énekelni*]]]]]
 Mary VM will only the Mahler songs want-INF sing-INF

b.* *Mari* [_{AspP} *el* [_{VP1} *fogja* [_{VP2} *akarni* [_{FP CSAK A MAHLER DALOKAT} [_{VP3} *énekelni*]]]]]

(24) a. *Mari* [_{NegP} *nem* [_{VP1} *fogja* [_{FP CSAK A MAHLER DALOKAT} [_{VP2} *akarni* [_{VP3} *el- énekelni*]]]]]]]
 Mary not will only the Mahler songs want-INF VM sing-INF
 'Mary will not want to sing only the Mahler songs.'

b. *Mari* [_{NegP} *nem* [_{VP1} *fogja* [_{VP2} *akarni* [_{FP CSAK A MAHLER DALOKAT} [_{VP3} *el- énekelni*]]]]]]]
 Mary not will want-INF only the Mahler songs VM sing-INF
 'Mary will not want to sing only the Mahler songs.' Cf.

VM-climbing is also blocked by negation:

(25) a. **Mari fel_i szeretne nem kerülni t_i a listára.*
 Mary up would.like not get-INF the list-on
 'Mary would like not to be on the list.'

b. *Mari szeretne nem fel_i-kerülni t_i a listára.*

The possibility of inserting arguments and adjuncts between the verbal elements also correlates to a certain extent with whether the AspP c-commands the whole verbal complex or it c-commands only the lexical verb. In the former case, the verbal complex constitutes a closer unit: an argument or an adjunct can marginally intervene only between the finite auxiliary and the nonfinite section of the verbal complex, i.e., between the highest V raised to Tense and Agreement, and the verbal complex proper, containing its trace.. (An adjunct is more acceptable in both types of the verbal complex than an argument.)

(26) a. ?[_{AspP} *Haza fog a fogoly akarni próbálni szökni*]
 home will the captive want-INF try-INF flee-INF
 'The captive will want to try to flee home.'

b. ??[_{AspP} *Haza fog akarni próbálni a fogoly szökni*]

c. *[_{AspP} *Haza fog akarni a fogoly próbálni szökni*]

In case V1 is preceded by a focus or negation, i.e., no VM climbing takes place, intervening material - whether an argument or an adjunct - can appear anywhere in the verbal complex.:

(27) a. [_{FP ALIGHA fog a fogoly akarni próbálni haza szökni}]
 hardly will the captive want-INF try-INF home flee-INF
 'Hardly will the captive want to try to flee home.'

b. ? [_{FP Aligha fog akarni a fogoly próbálni haza szökni}]

c. ?? [_{FP Aligha fog akarni próbálni a fogoly haza szökni}]

Nevertheless, the lesser cohesion of infinitival constructions without VM climbing does not mean that they are complex sentences involving embedded infinitival clauses. A verb string consisting of one or more auxiliaries and one lexical verb always forms a verbal complex, whose auxiliary members are subject to the Auxiliary Constraint. An intervening lexical verb turns a verbal complex ungrammatical not only in the presence of VM climbing but also in the presence of focussing or negation:

(28) a. **A fogoly* [_{AspP} *haza fog félni akarni szökni*]
 the captive home will fear-INF try-INF flee-INF
 'The captive will be afraid to try to flee home.'

b. %*A fogoly* [_{NegP} *nem fog félni akarni haza szökni*]

Félni 'to be afraid', a lexical verb, cuts the verbal string into two verbal complexes in both sentences, and the resulting verbal complexes must satisfy the Auxiliary Constraint separately. (28a) is ungrammatical because the VM of the lexical head of the lower verbal complex cannot be raised into the higher verbal complex, which represents a separate phase. (28b) is only acceptable if *akarni* 'to want', the topmost auxiliary of the 2nd verbal complex, is interpreted emphatically (negating a previous negation). These are the correct neutral versions of (28a) and (28b):

(29) a. *A fogoly* [_{AspP} *félni fog* [_{AspP} *haza akarni szökni*]]
 b. *A fogoly* [_{NegP} *nem fog félni* [_{AspP} *haza akarni szökni*]]

In (29a), the Spec,AspP position of the higher verbal complex is filled with *félni* 'be afraid', there being no other available candidate. *Haza* 'home' undergoes VM climbing into the Spec,AspP of the lower verbal complex in both examples.

In sum: a verb string consisting of a finite verb and one or more infinitives represents a verbal complex if it contains a single theta-role-assigning lexical verb, whose arguments the higher verbs share. In the straight order verbal complex the linear order of the verbal elements corresponds to their relative structural prominence: the finite auxiliary is first and the lexical infinitive is last. The Auxiliary Constraint, stating that an auxiliary cannot represent the main assertion, i.e., the highest and leftmost element of the predicate phrase, triggers VM climbing - unless the finite auxiliary is preceded by a focus or a negative particle. VM climbing creates a "tighter" subtype of the straight order verbal complex, because the AspP category it assigns to it represents a syntactic and semantic unit which is closed for logical operators and functional adverbials. This fact has actually been observed in connection with VM climbing across CP, as well. Compare:

- (30)a. *Fel kell*, [_{CP} *hogy* [_{VP} *hívjam Marit*]]
 up needs that call-I Mary-ACC
 'It is necessary that I call up Mary.'
- b.**Fel kell*, [_{CP} *hogy* [_{FP} *CSAK MARIT hívjam*]]
 up needs that only Mary-ACC call-I
 'It is necessary that I call only Mary up.'
- c.**Fel kell*, [_{CP} *hogy* [_{NegP} *ne hívjam Marit*]]
 up needs that not call-I Mary-ACC
 'It is necessary that I don't call up Mary.'
- d.?*Fel kell*, [_{CP} *hogy* [_{TopP} *Marit hívjam*]]
 up needs that Mary-ACC call-I
 'It is necessary that Mary, I call up.'

The fact that the domain of an AspP is closed for logical operators and functional adverbials must have a semantic explanation: AspP is the smallest semantic unit comprising a predicate and its arguments, which can be modified or quantified upon by clause-level operators only from the outside.

4. The Dutch/West Flemish/Swiss German verbal complex

In the Dutch verbal complex involving one or more auxiliaries and a lexical infinitive, the verbal elements and the verb modifier appear in the same relative orders that was attested in Hungarian. The order of the verbal elements is V1 V2 V3 V4, and the verb modifier precedes either the lexical verb (V4), or the whole verbal complex. That is:

- (31)a. *dat hij had kunnen willen binnen komen* (V1 V2 V3 VM V4)
 that he would've could want in come
 'that it could've been the case that he wanted to come in'
- b. *dat hij binnen had kunnen willen komen* (VM V1 V2 V3 V4)

The order illustrated in (31a) is somewhat more constrained than that in (31b): whereas complex verb modifiers are barred from the internal VM position immediately preceding V4, they may appear in the VM position preceding V1. This may mean that a VM can only survive inside the verbal complex if it is incorporated into V4 (cf. Neeleman 1994):

- (32)a.**dat Jan de deur wil heel groen verven*
 that John the door wants very green paint
 'that John wants to paint the door very green.'
- b. *dat Jan de deur heel groen wil verven*

If the Dutch lexical verb does not select a verb modifier, the straight V1 V2 V3 V4 order of the verbal elements is preserved:

- (33) *dat hij had kunnen willen komen* (V1 V2 V3 V4)
 that he would've could want come
 'that it could've been the case that he wanted to come'

That is, the Auxiliary Constraint in (17) does not force the preposing of V4 into the initial position of the verbal complex - presumably because the locus of main assertion is not at the left edge of the predicate phrase.

Whereas in Dutch nothing but the verb modifier can intervene between the verbal elements of the verbal complex, other West-Germanic languages adopting the same strategy of verbal complex formation, namely, West Flemish and Swiss German (Züritüütsch), do allow intervening constituents - as demonstrated by Haegeman-van Riemsdijk (1986). Consider a Swiss German example:

- (34)a. *das er hät en arie wele chöne singe* (V1 DP V2 V3 V4)
 that he has an aria want can sing
 'that he has wanted to be able to sing an aria'
- b. *das er hät wele en arie chöne singe* (V1 V2 DP V3 V4)
 c. *das er hät wele chöne en arie singe* (V1 V2 V3 DP V4)

Like in Hungarian, a constituent of any grammatical function can appear in the positions of the intervening DP in (34a-c), even though the restrictions that various predicate types impose on the relative order of their arguments also hold for them if they are spread among the elements of a verbal complex - see Haegeman-van Riemsdijk (1986:441). What is more, constituents of operator function can also intervene - see (35), and, like in Hungarian, they have scope over the section of the predicate that they precede and c-command. VM climbing blocks the possibility of inserting operators among the elements of the verbal complex - see (36).

- (35)a. *...das mer d büecher händ nöme wele tsruk bringe*
 that we the books have no-more wanted back bring
 '...that we did not want to bring the books back any more'
- b. *...das mer d büecher händ wele nöme tsruk bringe*
 c. *...das mer d büecher händ nöme tsruk wele bringe*
- (36) **...das mer d büecher tsruk händ wele nöme bringe*
 that we the books back have wanted no-more bring

5. The inverse order variant of the extended verbal complex in Hungarian

Returning to Hungarian, when the verbal complex is preceded by a focus or a negative particle, the non-finite elements of the verbal complex can also appear in an inverse order:

- (37) *A fogoly HIÁBA fog haza szökni próbálni akarni.* (V1 VM V4 V3 V2)
 the captive in.vain will home flee-INF try-INF want-INF
 'In vain will the captive want to try to flee home.'

In addition to the V1 VM V4 V3 V2 order, illustrated in (37), the V1 V2 VM V4 V3 order is also possible, i.e., the inverse order can only be restricted to the bottom part of the verbal complex:

- (38) *A fogoly HIÁBA fog akarni haza szökni próbálni.* (V1 V2 VM V4 V3)

The elements in the inverse order section of the verbal complex must be strictly adjacent; the straight and the inverse order section, however, can be separated by non-verbal elements. E.g.

- (39)a. *A fogoly nem fog most haza szökni próbálni akarni.*
 the captive not will now home flee-INF try-INF want-INF
 'The captive will not want to try to flee home now.'
- b. **A fogoly nem fog haza szökni most próbálni akarni.*
 c. **A fogoly nem fog haza szökni próbálni most akarni.*

The complement-head order, typical of word internal domains, as well as the strict adjacency of the infinitival elements have lead Brody (1997) and É. Kiss (1999) to the conclusion that the construction in question has been derived by cyclic incorporation, in fact, compounding, hence it represents a complex word.⁴

As a first step of compounding, the VM is incorporated into V4. That is:

- (40) *A fogoly nem fog akarni próbálni [haza szökni]* (Neg V1 V2 V3 [VM V4])

Then, as a next step, the VM+V4 unit is incorporated into V3:

- (41) *A fogoly nem fog akarni [[haza szökni]_i próbálni] t_i* (Neg V1 V2 [[VM V4] V3])

Cyclic incorporation can stop at this point. The resulting structure was illustrated in (30). Alternatively, V3 (with V4 incorporated into it) is incorporated into V2:

(42) *A fogoly nem fog* [[*haza szökni próbálni*]_i *akarni*] *t_i* (Neg V1 [[[VM V4] V3]V2])

Surprisingly, the complex V2 cannot be incorporated into the finite V1, i.e., (43) is ungrammatical:

(43)**A fogoly* [[*haza szökni próbálni akarni*]_i *fog*] *t_i*. (*[[[[VM V4]V3]V2]V1])

It must be the Tense on V1 that blocks incorporation into V1. This hypothesis is supported by the fact that in infinitival constructions involving no finite V, e.g. that in (44) below, cyclic left-adjunction and incorporation can precede all the way up in the verbal complex.

(44) [[[*Haza szökni*] *próbálni*] *akarni*] *hiábavaló dolog*. (VM V3 V2 V1)
 home flee-INF try-INF want useless thing
 'Wanting to try to flee home is a useless thing.'

Since the finite verb cannot incorporate the [[[VM V4] V3] V2] complex, the V1[[[VM V4] V3] V2] string must be saved from the Auxiliary Constraint in some other way: it must be subsumed by an FP or a NegP, as in (42) or else V1 must be interpreted as the negation of a former negation.

The claim that the inverse order section in this type of verbal complex forms a compound, dominated by a single V node, is supported by an interesting piece of morphological evidence. The evidence involves verbal complexes containing an impersonal auxiliary subject to the Auxiliary Constraint, such as *kell* 'need' or *szabad* 'may', and an inflected infinitive. Such infinitives, selected by impersonal predicates, take a dative subject, and bear an agreement marker which agrees in person and number with the dative subject. For example:

(45) *Nekem haza kell men-n-em*
 I-DAT home needs go-INF-1SG

Neked haza kell men-n-ed
 you-DAT home needs go-INF-2SG

Neki haza kell men-ni-e
 he-DAT home needs go-INF-3SG etc.

In case the 'kelleni menni' phrase is combined with a finite auxiliary, the following straight order verbal complexes can be constructed:

(46)a. *Neki haza fog kelleni men-ni-e.*
 he-DAT home will need go-INF-3SG
 'He will need to go home.'

b. *Neki nem fog kelleni haza men-ni-e.*
 he-DAT not will need home go-INF-3SG
 'He will not need to go home.'

If we attempt to construct an inverse order verbal complex, agreement ought to be internal to the resulting compound:

(47)?**Neki nem fog haza men-ni-e kelle-ni.*
 he-DAT not will home go-INF-3SG need-INF

People find this construction very marginal - obviously because Hungarian prohibits infixes; it only accepts suffixes. Accordingly, most people apply the repair strategy of placing the agreement suffix to the very end of the compound, as shown in (48). (Others reject the construction in every form.)

(48) *Neki nem fog haza men-ni kelle-ni-e*
 he-DAT not will home go-INF need-INF-3SG

The fact that the agreement suffix is forced to be suffixed to the wrong stem is clear evidence of the fact that [[*haza menni kelleni*]] is analyzed as a compound, which is available for suffixation only at its right edge.

6. The German verbal complex

In High German and in several German dialects, the order of the verbal elements in verbal complexes involving a temporal auxiliary and one or more modals is not the VM V4 V3 V2 V1 order expected in an SOV language, but, surprisingly, the V1 VM V4 V3 V2 order also attested in Hungarian. That is:

(49) a. **dass er herein kommen wollen können hätte* (*VM V4 V3 V2 V1)
 that he in come want can had
 'that he could have wanted to come in'

b. *dass er hätte herein kommen wollen können* (V1 VM V4 V3 V2)

The construction illustrated in (49b) also has a further peculiarity, in addition to its unexpected word order: the verbal element complementing the temporal auxiliary has the morphological form of an infinitive (*können*), instead of that of a past participle.

Verbal complexes involving a future auxiliary and a modal, or more than one modals also display the word order illustrated in (49b) in many German dialects (obligatorily in Switzerland, and optionally elsewhere). For example:

(50) *dass er nur eine Probleme wird lösen können wollen* (V1 V4 V3 V2)
 that he only one problem will solve can want
 'that he will want to be able to solve only one problem'

Similar to Hungarian, German also allows partial inversion, i.e. a V1 V2 V4 V3 order:

(51)a. *dass er hätte können herein kommen wollen* (V1 V2 VM V4 V3)
 b. *dass er nur eine Probleme wird wollen lösen können* (V1 V2 V4 V3)

(The V1 V2 V3 VM V4 order, which is acceptable in Hungarian, is ungrammatical in German. This fact, however, does not affect the claim that the German verbal complex in question, and the Hungarian verbal complex derived by cyclic incorporation are parallel. The V1 V2 V3 VM V4 string is acceptable in Hungarian as a straight order verbal complex. In the derivation of the inverse order verbal complex it merely represents an intermediate step, which is never spelled out as such.)

Like in Hungarian, the elements in the inverse order section of the verbal complex cannot be separated by either an argument or an adjunct. At the boundary between the straight and the inverse order sections, however, short elements can intervene. Cf.

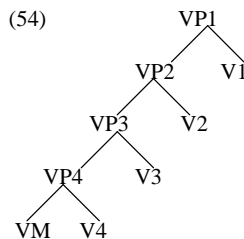
(52)a. *dass er nur eine Probleme wird schnell lösen können wollen*
 that he only one problem-ACC will quickly solve can want
 'that he will want to be able to solve only one problem quickly'

b. **dass er nur eine probleme wird lösen schnell können wollen*

(53)a. *dass er nur eine Probleme wird wollen schnell lösen können*
 b. **dass er nur eine Probleme wird wollen lösen schnell können*

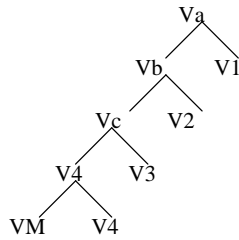
7. Deriving the word order of West Germanic verbal complexes

The standard analysis of the West-Germanic verbal complex by Haegeman and van Riemsdijk (1986) derives the straight order and inverse order variants attested in the different Germanic languages from a common OV base. That is, for them the VM V4 V3 V2 V1 order in (54) is the 'straight', base-generated order, and the V1 V2 V3 V4 order is the inverse order (derived literally by inversion).



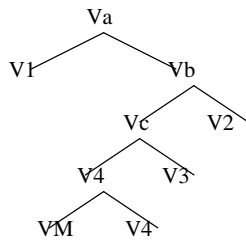
The verbal elements undergo cyclic reanalysis in every West-Germanic language. First the verb modifier is incorporated into V4, then V4 and V3 are reanalyzed as a single verb (marked as Vc in the diagram below), then the resulting Vc is combined with V2 into the complex verb Vb, and eventually Vb is combined with V1 into Va.

(55)



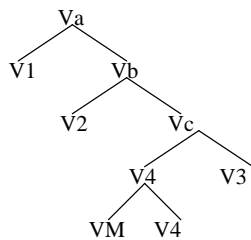
The different orders attested in the different languages result from inversion performed on various segments of the structure in (55). In German V1 and Vb are obligatorily inverted, which yields the order in (56):

(56)



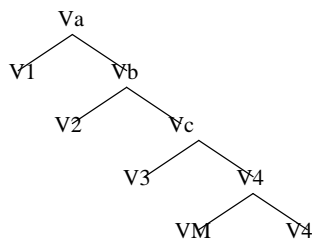
The inversion of Vc and V2 is optional; when performed, it yields the order in (57):

(57)



In Dutch, West-Flemish, and Swiss German, inversion obligatorily takes place on every cycle involving two verbal elements. The resulting word order is the opposite of the order of the base:

(58)



The verb modifier of V4 in structure (54) is not necessarily incorporated into V4. If it does not take part in cyclic reanalysis, it will not be affected by inversion, either, hence it will end up on the left-hand side of the inverted verbal complex - as happened in the Dutch (25b).

In West-Flemish and Swiss German the verbal elements participating in reanalysis and inversion are not necessarily bare verbs but can also be complete or remnant verb projections containing arguments and/or adjuncts.

The proposed derivation, though widely accepted, is not fully convincing, as it derives the various word order possibilities attested in the different West-Germanic languages by an ad hoc operation. Inversion is not an independently motivated operation of Universal Grammar. It is not clear what it is triggered by, and what constraints it is subject to. If it were a standard operation of Universal Grammar, we would expect all sister nodes of the same category to be potential targets of it. In fact, sister nouns, adjectives, or prepositions are not invertable:

(59) head master - *master head

dark blue - *blue dark
 out of ... - *of out...

It also remains unexplained that in German, for example, inversion is obligatory on the highest level of the verbal complex, and is optional on the lower levels.

Furthermore, in German, inversion goes together with an 'infinitive for participle' effect - see (49b), which suggests that the two phenomena are related - however, the theory in question does not establish a causal link between them.

The various types of verbal complexes attested in West-Germanic are surprisingly similar to the possible verbal complexes of Hungarian, displaying the same word order, the same alternative positions for the verb modifier, and the same restricted possibilities for intervening material among the verbal elements. If identical constructions displaying identical syntactic properties are derived from different underlying structures by means of different operations, a generalization is likely to be missed.

8. Can the West-Germanic and the Hungarian verbal complexes be derived in parallel ways?

First let us examine if the the OV analysis of the West-Germanic constructions in question can be extended to Hungarian. As a first step, let us juxtapose the two possible word order variants of the 'straight order' verbal complex in the two languages..

(60)a. *A fogoly haza fog akarni próbálni szökni.* (VM V1 V2 V3 V4)
 the captive home will want-INF try-INF flee-INF
 'The captive will want to try to flee home.'

b. *A fogoly nem fog akarni próbálni haza szökni.* (V1 V2 V3 V4 VM)
 the captive not will want-INF try-INF home flee-INF
 'The captive will not want to try to flee home.'

(61)a. *dat hij had kunnen willen binnen komen* (V1 V2 V3 VM V4)
 that he would've could want in come
 'that it could've been the case that he wanted to come in'

b. *dat hij binnen had kunnen willen komen* (VM V1 V2 V3 V4)

According to the standard, OV analysis of Dutch, the VM and V1 of (61b) are in situ, and V2, V3, and V4 have undergone rightward movement. In (61a) the VM also went along with V4 to the right.

The fact that this analysis cannot be extended to (60a,b) becomes clear if we demonstrate that the construction in (60b) is a member of a paradigm. A lexical verb and a preceding auxiliary can share a verb modifier whether they are separated by an infinitival boundary, a finite IP boundary, or a CP boundary, with C containing a complementizer. The verb modifier, selected by the lexical verb, precedes the auxiliary in every case. If a CP boundary intervenes between them, the subordinate and the matrix domains are strictly separated by the complementizer. It is the CP on the right that contains a gap coindexed with the verb modifier on the left, i.e., the construction can only be analyzed as the output of leftward VM movement. The possibility of rightward verb movement is excluded. Observe (62), in which a modal verb attracts a verb modifier - first from an infinitive phrase, then from a finite clause.

(62)a. *János szét akarja szedni a rádiót.* (VM_i V1 V2 t_i)
 John apart wants take-INF the radio
 'John wants to take apart the radio.'

b. *János szét akarja, [CP hogy szedjem a rádiót]* (VM_i V1 [CP C V2 t_i])
 John apart wants that take-SUBJ-1SG the radio
 'John wants that I should take the radio apart.'

In (63) an impersonal modal attracts a verb modifier - first from an infinitive supplied with an agreement morpheme, then from a finite clause without a complementizer, and finally from a finite clause introduced by an overt complementizer.

(63)a. *Szét kell szednem a rádiót.* (VM_i V1 V2 t_i)
 apart must take-1SG the radio-ACC
 'It is necessary for me to take the radio apart.'

b. *Szét kell [IP szedjem a rádiót]* (VM_i V1 [IP V2 t_i])
 apart must take-SUBJ-1SG the radio-ACC
 'It is necessary I take the radio apart.'

c. *Szét kell, [CP hogy szedjem a rádiót]* (VM_i V1 [CP C V2 t_i])

apart must that take-SUBJ-1SG the radio-ACC
 'It is necessary that I take the radio apart.'

The processes illustrated in the (a), (b), and (c) examples under (62) and (63) are clearly parallel. There is no way in which (62c) and (63c) could be analyzed as instances of rightward verb movement: it is the verb modifier in the matrix clause that has been displaced from the embedded clause containing the verb to which it belongs.

On the basis of this evidence I conclude that, if the similar Hungarian and the West-Germanic verbal complexes are indeed to be derived in parallel ways, by identical operations performed on similar underlying structures, they must be derived from a VO base - as has been argued for by den Dikken (1994) and Zwart (1996). The 'straight'-order (V1 V2 V3 V4) verbal complex is an extended verb projection in which the lexical V4 is extended by modal and temporal auxiliaries acting as functional heads. The verb modifier merges either with the whole verbal complex, or with the lexical VP. The latter move creates a 'tighter' verbal complex, which is closed to intervening operators, and intervening arguments and adjuncts are also marginal. In lack of VM climbing, the verbal complex may be open to intervening material - as is the case in Hungarian, West Flemish and Swiss German. In languages which allow an intervening complement or adjunct among the verbal elements of the verbal complex, the intervening elements are adjoined to the maximal projections merging into a single extended projection.

The inverted section of the 'inverse'-order verbal complex (V1 V4 V3 V2, or V1 V2 V4 V3) is derived by compounding; that is why no adjunct or argument can intervene between its elements. Compounding cannot involve V1, the element having no infinitival suffix but carrying a Tense morpheme. Apparently, a compound cannot contain word-internal inflection. The infinitival suffix does not count as such, but the Tense and Agreement suffixes and the participial suffix are analyzed as inflectional endings. This constraint also explains the 'infinitivus pro participio' effect in German, i.e., the obligatory replacement of the participle subcategorized by the perfect auxiliary by an infinitive.

Notes

1 For details, see Bartos (1999).

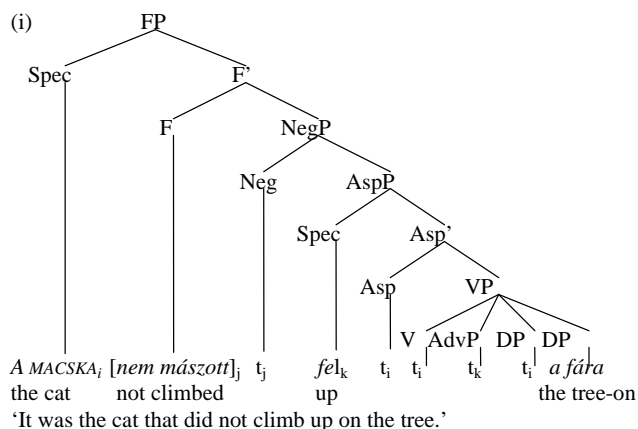
2 Cf. Pinon (1995).

3 In an alternative analysis, Brody (1990) claims that the FP projection is built on top of AspP, and the verb moves from Asp into the empty F head, crossing the VM in Spec,AspP. In this framework, the verb of a negative sentence moves from Asp to Neg across VM. This assumption raises various problems. First, it predicts a focus-V-VM-XP or Neg-V-VM-XP order, however, the VM need not occupy an immediately postverbal position. Cf.

(i) *János nem mászott a kerítésre fel.*

John not climbed the fence-on up
 'John did not climb up on the fence.'

Second, although head-to-head movement normally involves left-adjunction to the target, the V raised to Neg follows the negative particle. If the NegP is further extended into an FP, what moves on from Neg to F is the *nem*+V string. That is:



Olsvay (2000) pointed out a further problem with (i): in negated elliptical sentences the V can be deleted, with the negative particle spelled out, which provides evidence against a *nem+V* complex. E.g.:

(ii) *A macska fel mászott a kerítésre, a kutya viszont nem mászott fel.*
the cat up climbed the fence-on the dog however not climbed up
'The cat climbed up on the fence, the dog, on the other hand, didn't.'

4 Koopman and Szabolcsi (2000) deny this conclusion; they analyze both the straight order construction and the inverse order construction as (remnant) phrasal movement.

References

- Bartos, H. 1999. *Morfoszintaxis és interpretáció: a magyar inflexiós jelenségek szintaktikai háttere*. PhD dissertation, Budapest: Eötvös Loránd University.
- Brody, M. 1990. "Remarks on the order of elements in the Hungarian focus field". In *Approaches to Hungarian 3*, I. Kenesei (ed.), 95-122. Szeged: JATE.
- Brody, M. 1997. *Mirror theory*. Unpublished, Linguistic Institute of the Hungarian Academy of Sciences.
- Chomsky, N. 1995. *The Minimalist Program*. Cambridge, Mass.: MIT Press.
- Dikken, M. den 1994. "Minimalist verb (projection) raising". In *Minimalism and Kayne's Antisymmetry Hypothesis*, J.-W. Zwart (ed.), *Groninger Arbeiten zur Germanistischen Linguistik*.
- É. Kiss, K. 2002. *The Syntax of Hungarian*. Cambridge: Cambridge University Press.
- É. Kiss, K. and Kiefer, F. (eds) 1994. *The syntactic structure of Hungarian*. *Syntax and Semantics 27*. San Diego-New York: Academic Press.
- Evers, A. 1975. *The Transformational Cycle in Dutch and German*. Ph.D. dissertation, University of Utrecht.
- Grimshaw, J. 1991. Extended projection. Unpublished, Brandeis University.
- Hageman, L. and Riemsdijk, H. van 1986. "Verb Projection Raising, Scope, and the Typology of Rules Affecting Verbs". *Linguistic Inquiry* 17: 417-466.
- Kálmán, C. Gy. et al. 1989. "A magyar segédigék rendszere". *Általános Nyelvészeti Tanulmányok* 17: 49-103.
- Kayne, R. 1994. *The Antisymmetry of Syntax*. Cambridge, Mass.: MIT Press.
- Kenesei, I. 2000. "Van-e segédige a magyarban?" In *Igei vonzatszerkezet a magyarban*, I. Kenesei (ed.), 157-196. Budapest: Osiris.
- Neeleman, A. 1994. *Complex predicates*. Ph.D. dissertation, University of Utrecht.
- Koopman, H. and Szabolcsi, A. 1998. *Verbal complexes*. Cambridge, Mass.: MIT Press.
- Olsvay, Csaba. 2000. *Negative quantifiers in the Hungarian sentence*. Thesis, Theoretical Linguistics Program, Eötvös Loránd University, Budapest.
- Pinon, Ch. 1995. "Around the Progressive in Hungarian". In *Approaches to Hungarian V*, I. Kenesei (ed.), 153-192. Szeged: JATE.
- Riemsdijk, H. van 1998. "Categorial feature magnetism: The endocentricity and distribution of projections". *Journal of Comparative Germanic Linguistics* 2:1-18.
- Zwart, J.-W. 1996. "Verb Clusters in Continental West Germanic Dialects". In *Microparametric Syntax and Dialect Variation*, J. Black and V. Montapanyane (eds), 229-258. Amsterdam: John Benjamins.
- Zwart, J.-W. 1997. *Morphosyntax of Verb Movement*. Dordrecht: Kluwer.